

AMENDMENTS TO THE CLAIMS

Claims 1-25 (Cancelled)

Claim 26 (Previously Presented) A portable recording apparatus for connecting to a terminal apparatus and for detecting times and places of connections, said portable recording apparatus comprising:

a storage unit configured for prestoring first authentication information relating to and given by an original user, and having a first user area corresponding to the first storage authentication information;

a judgment unit configured for, upon detection of a connection of said portable recording apparatus to the terminal apparatus, obtaining (i) a time difference, which is a difference between a time at which the connection was detected and a prestored time at which a prior connection was detected, the time at which the connection was detected being obtained from the terminal apparatus, and the prestored time at which the prior connection was detected being a time previously obtained, and (ii) a place difference, which is a difference between a place at which the connection was detected and a prestored place at which a prior connection was detected, the place at which the connection was detected being obtained from the terminal apparatus, and the prestored place at which the prior connection was detected being a place previously obtained, and for judging whether or not one or both of the obtained time difference and the obtained place difference is greater than or equal to a corresponding predetermined value;

a reception unit configured for requesting and receiving authentication information from

a current user if said judgment unit judges that one or both of the obtained time difference and the obtained place difference is greater than or equal to the corresponding predetermined value;

a tamper-resistant authentication unit configured for authenticating the received authentication information of the current user based on the prestored first authentication information; and

a permission unit configured for permitting use of the first user area to the current user if (i) said tamper-resistant authentication unit authenticates the received authentication information of the current user based on the first authentication information, or (ii) said judgment unit judges that one or both of the obtained time difference and the obtained place difference is not greater than or equal to the corresponding predetermined value.

Claim 27 (Previously Presented) The portable recording apparatus of claim 26, wherein said tamper-resistant authentication unit is configured for determining whether or not the received authentication information of the current user matches the first authentication information, and for authenticating the current user if the received authentic information of the current user matches the first authentication information.

Claim 28 (Previously Presented) The portable recording apparatus of Claim 26, wherein:

said storage unit is configured for storing second authentication information which (i) is different from the first authentication information, and (ii) relates to and is given by the original user, and includes a second user area corresponding to the second authentication information;

said tamper-resistant authentication unit is configured for judging whether or not the

received authentication information of the current user matches the second authentication information, and for authenticating the current user if the received authentication information of the current user matches the second authentication information; and

said permission unit is configured for permitting use of the second user area to the current user if (i) said tamper-resistant authentication unit authenticates the received authentication information of the current user based on the second authentication information, or (ii) said judgment unit judges that one or both of the obtained time difference and the obtained place difference is not greater than or equal to the corresponding predetermined value.

Claim 29 (Previously Presented) The portable recording apparatus of claim 26, wherein said judgment unit includes:

a history storage subunit configured for prestoring connection history information, which is information indicating one or both of (i) the prestored prior connection time, and (ii) the prestored prior connection place;

a connection detection subunit configured for detecting the connection to the terminal apparatus;

an information obtaining subunit configured for, when the connection to the terminal apparatus is detected by said connection detection subunit, obtaining current connection information from the terminal apparatus, which is information indicating one or both of (i) the current connection time, and (ii) the current connection place; and

an information judgment subunit configured for obtaining a time difference and/or a place difference using the connection history information and the current connection

information, and for judging whether or not the time difference or the place difference is greater than or equal to a corresponding predetermined value.

Claim 30 (Previously Presented) The portable recording apparatus of claim 29, wherein:

the connection history information is information which indicates a time at which a most recent prior connection to the terminal apparatus was detected;

the current connection information is information which indicates a time at which the current connection to the terminal apparatus was detected; and

said information judgment unit is configured for judging whether or not the time difference between the time indicated by the connection history information and the time indicated by the current connection information is greater than or equal to the predetermined value.

Claim 31 (Previously Presented) The portable recording apparatus of claim 29, wherein:

the connection history information is information which indicates a place at which a most recent prior connection to the terminal apparatus was detected;

the current connection information is information which indicates a place at which the current connection to the terminal apparatus was detected; and

said information judgment unit is configured for judging whether or not the place difference between the place indicated by the connection history information and the place indicated by the current connection information is greater than or equal to the predetermined value.

Claim 32 (Previously Presented) The portable recording apparatus of claim 29, wherein:

the first authentication information is one of (i) a first set of one or more characters, (ii) biological characteristics of the original user, or (iii) a combination of the first set of characters and the biological characteristics of the original user; and

the received authentication information of the current user is one of (i) a second set of one or more characters, (ii) biological characteristics of the current user, or (iii) a combination of the second set of characters and the biological characteristics of the current user.

Claim 33 (Previously Presented) The portable recording apparatus of claim 32, wherein:

the biological characteristics of the original user includes information which is one of (i) fingerprint information representing characteristics of the original user's fingerprint pattern, (ii) voiceprint information representing characteristics of the original user's voiceprint, (iii) iris information representing characteristics of the original user's iris, (iv) face-outline information relating to characteristics of an outline of the original user's face, or (v) DNA information relating to characteristics of the original user's DNA; and

the biological characteristics of the current user includes information which is one of (i) fingerprint information representing characteristics of the current user's fingerprint pattern, (ii) voiceprint information representing characteristics of the current user's voiceprint, (iii) iris information representing characteristics of the current user's iris, (iv) face-outline information relating to characteristics of an outline of the current user's face, or (v) DNA information relating to characteristics of the current user's DNA.

Claim 34 (Previously Presented) The portable recording apparatus of claim 26, wherein:

said portable recording apparatus includes an assigned telephone number which is an identifier of the terminal apparatus connected thereto;

said storage unit is configured for storing communication information which is information representing the assigned telephone number;

the first user area corresponds to the communication information;

said reception unit is configured for receiving a specification of a telephone number when said judgment unit judges that one or both of the obtained time difference and the obtained place difference is greater than or equal to the corresponding predetermined value; and

said permission unit is configured for permitting, to the current user, use of the first user area corresponding to both the first authentication information and the communication information representing the telephone number of the received specification if (i) said tamper-resistant authentication unit authenticates the received authentication information of the current user based on the first authentication information, or (ii) said judgment unit judges that one or both of the obtained time difference and the obtained place difference is not greater than or equal to the corresponding predetermined value.

Claim 35 (Previously Presented) The portable recording apparatus of claim 34, further comprising a setting unit configured for receiving the first authentication information and the communication information from the original user, and for writing, to said storage unit, the first authentication information and the communication information in correspondence with the first

user area of said storage unit.

Claim 36 (Previously Presented) The portable recording apparatus of claim 26, further comprising a setting unit configured for receiving the first authentication information from the original user, and for writing to said storage unit the first storage authentication information in correspondence with the first user area of said storage unit.

Claim 37 (Previously Presented) The portable recording apparatus of claim 26, wherein:
said judgment unit includes:

a first judgment subunit configured for, upon detection of the connection to the terminal apparatus, judging whether or not the time difference is greater than or equal to a first value; and

a second judgment unit configured for, when said first judgment unit judges that the time difference is not greater than or equal to the first value, judging whether or not the place difference is greater than or equal to a second value; and

said tamper-resistant authentication unit is configured for requesting, from the current user, the authentication information when at least one of said first judgment unit judges that the time difference is greater than or equal to the first value or said second judgment unit judges that the place difference is greater than or equal to the second value.

Claim 38 (Previously Presented) A system including a portable recording apparatus and a terminal apparatus and for preventing unauthorized use of said portable recording apparatus,

wherein:

said portable recording apparatus is for connecting to said terminal apparatus and for detecting times and places of connections, and said portable recording apparatus comprises:

a storage unit configured for prestoring first authentication information relating to and given by an original user, and having a first user area corresponding to the first storage authentication information;

a judgment unit configured for, upon detection of a connection of said portable recording apparatus to said terminal apparatus, obtaining (i) a time difference, which is a difference between a time at which the connection was detected and a prestored time at which a prior connection was detected, the time at which the connection was detected being obtained from said terminal apparatus, and the prestored time at which the prior connection was detected being a time previously obtained, and (ii) a place difference, which is a difference between a place at which the connection was detected and a prestored place at which a prior connection was detected, the place at which the connection was detected being obtained from said terminal apparatus, and the prestored place at which the prior connection was detected being a place previously obtained, and for judging whether or not one or both of the obtained time difference and the obtained place difference is greater than or equal to a corresponding predetermined value;

a reception unit configured for requesting and receiving authentication information from a current user if said judgment unit judges that one or both of the obtained time difference and the obtained place difference is greater than or equal to the corresponding predetermined value;

a tamper-resistant authentication unit configured for authenticating the received authentication information of the current user based on the prestored first authentication information; and

a permission unit configured for permitting use of the first user area to the current user if (i) said tamper-resistant authentication unit authenticates the received authentication information of the current user based on the first authentication information, or (ii) said judgment unit judges that one or both of the obtained time difference and the obtained place difference is not greater than or equal to the corresponding predetermined value; and

said terminal apparatus comprises an input/output unit configured for receiving, as an input, the authentication information from the current user, and configured for outputting the received authentication information to said portable recording apparatus.

Claim 39 (Previously Presented) The system of claim 38, wherein said tamper-resistant authentication unit is configured for determining whether or not the received authentication information of the current user matches the first authentication information, and for authenticating the current user if the received authentic information of the current user matches the first authentication information.

Claim 40 (Previously Presented) The system of claim 38, wherein:

said storage unit is configured for storing second authentication information which (i) is different from the first authentication information, and (ii) relates to and is given by the original user, and includes a second user area corresponding to the second authentication information;

said tamper-resistant authentication unit is configured for judging whether or not the received authentication information of the current user matches the second authentication information, and for authenticating the current user if the received authentication information of the current user matches the second authentication information; and

said permission unit is configured for permitting use of the second user area to the current user if (i) said tamper-resistant authentication unit authenticates the received authentication information of the current user based on the second authentication information, or (ii) said judgment unit judges that one or both of the obtained time difference and the obtained place difference is not greater than or equal to the corresponding predetermined value.

Claim 41 (Previously Presented) The system of claim 38, wherein said judgment unit includes:

a history storage subunit configured for prestoring connection history information, which is information indicating one or both of (i) the prestored prior connection time, and (ii) the prestored prior connection place;

a connection detection subunit configured for detecting the connection to said terminal apparatus;

an information obtaining subunit configured for, when the connection to said terminal apparatus is detected by said connection detection subunit, obtaining current connection information from said terminal apparatus, which is information indicating one or both of (i) the current connection time, and (ii) the current connection place; and

an information judgment subunit configured for obtaining a time difference and/or a

place difference using the connection history information and the current connection information, and for judging whether or not the time difference or the place difference is greater than or equal to a corresponding predetermined value.

Claim 42 (Previously Presented) The system of claim 41, wherein:

the connection history information is information which indicates a time at which a most recent prior connection to said terminal apparatus was detected;

the current connection information is information which indicates a time at which the current connection to said terminal apparatus was detected; and

said information judgment unit is configured for judging whether or not the time difference between the time indicated by the connection history information and the time indicated by the current connection information is greater than or equal to the predetermined value.

Claim 43 (Previously Presented) The system of claim 41, wherein:

the connection history information is information which indicates a place at which a most recent prior connection to said terminal apparatus was detected;

the current connection information is information which indicates a place at which the current connection to said terminal apparatus was detected; and

said information judgment unit is configured for judging whether or not the place difference between the place indicated by the connection history information and the place indicated by the current connection information is greater than or equal to the predetermined

value.

Claim 44 (Previously Presented) The system of claim 38, wherein:

said portable recording apparatus includes an assigned telephone number which is an identifier of said terminal apparatus connected thereto;

said storage unit is configured for storing communication information which is information representing the assigned telephone number;

the first user area corresponds to the communication information;

said reception unit is configured for receiving a specification of a telephone number when said judgment unit judges that one or both of the obtained time difference and the obtained place difference is greater than or equal to the corresponding predetermined value; and

said permission unit is configured for permitting, to the current user, use of the first user area corresponding to both the first authentication information and the communication information representing the telephone number of the received specification if (i) said tamper-resistant authentication unit authenticates the received authentication information of the current user based on the first authentication information, or (ii) said judgment unit judges that one or both of the obtained time difference and the obtained place difference is not greater than or equal to the corresponding predetermined value.

Claim 45 (Previously Presented) The system of claim 38, wherein:

said judgment unit includes:

a first judgment subunit configured for, upon detection of the connection to the

terminal apparatus, judging whether or not the time difference is greater than or equal to a first value; and

a second judgment unit configured for, when said first judgment unit judges that the time difference is not greater than or equal to the first value, judging whether or not the place difference is greater than or equal to a second value; and

said tamper-resistant authentication unit is configured for requesting, from the current user, the authentication information when at least one of said first judgment unit judges that the time difference is greater than or equal to the first value or said second judgment unit judges that the place difference is greater than or equal to the second value.

Claim 46 (Previously Presented) A terminal apparatus for connecting to a portable recording apparatus and for detecting times and places of connections, said terminal apparatus comprising:

a storage unit configured for prestoring first authentication information relating to and given by an original user, and having a first user area corresponding to the first storage authentication information;

a judgment unit configured for, upon detection of a connection of the portable recording apparatus to said terminal apparatus, obtaining (i) a time difference, which is a difference between a time at which the connection was detected and a prestored time at which a prior connection was detected, the time at which the connection was detected being obtained from said terminal apparatus, and the prestored time at which the prior connection was detected being a time previously obtained, and (ii) a place difference, which is a difference between a place at which the connection was detected and a prestored place at which a prior connection was

detected, the place at which the connection was detected being obtained from said terminal apparatus, and the prestored place at which the prior connection was detected being a place previously obtained, and for judging whether or not one or both of the obtained time difference and the obtained place difference is greater than or equal to a corresponding predetermined value;

a reception unit configured for requesting and receiving authentication information from a current user if said judgment unit judges that one or both of the obtained time difference and the obtained place difference is greater than or equal to the corresponding predetermined value;

a tamper-resistant authentication unit configured for authenticating the received authentication information of the current user based on the prestored first authentication information; and

a permission unit configured for permitting use of the first user area to the current user if (i) said tamper-resistant authentication unit authenticates the received authentication information of the current user based on the first authentication information, or (ii) said judgment unit judges that one or both of the obtained time difference and the obtained place difference is not greater than or equal to the corresponding predetermined value.

Claim 47 (Previously Presented) The terminal apparatus of claim 46, wherein:

said storage unit is configured for storing second authentication information which (i) is different from the first authentication information, and (ii) relates to and is given by the original user, and includes a second user area corresponding to the second authentication information;

said tamper-resistant authentication unit is configured for judging whether or not the

received authentication information of the current user matches the second authentication information, and for authenticating the current user if the received authentication information of the current user matches the second authentication information; and

said permission unit is configured for permitting use of the second user area to the current user if (i) said tamper-resistant authentication unit authenticates the received authentication information of the current user based on the second authentication information, or (ii) said judgment unit judges that one or both of the obtained time difference and the obtained place difference is not greater than or equal to the corresponding predetermined value.

Claim 48 (Previously Presented) A method for using a portable recording apparatus, for connecting to a terminal apparatus, and for detecting times and places of connections, the portable recording apparatus including a storage unit configured for prestoring first authentication information relating to and given by an original user and having a first user area corresponding to the first authentication information and including a tamper-resistant authentication unit, said method comprising:

detecting a connection of the portable recording apparatus to the terminal apparatus;

obtaining (i) a time difference, which is a difference between a time at which the connection was detected and a prestored time at which a prior connection was detected, the time at which the connection was detected being obtained from the terminal apparatus, and the prestored time at which the prior connection was detected being a time previously obtained, and (ii) a place difference, which is a difference between a place at which the connection was detected and a prestored place at which a prior connection was detected, the place at which the

connection was detected being obtained from the terminal apparatus, and the prestored place at which the prior connection was detected being a place previously obtained;

judging whether or not one or both of the obtained time difference and the obtained place difference is greater than or equal to a corresponding predetermined value;

requesting and receiving authentication information from a current user if said judging judges that one or both of the obtained time difference and the obtained place difference is greater than or equal to the corresponding predetermined value;

authenticating the received authentication information of the current user based on the prestored first authentication information; and

permitting use of the first user area to the current user if (i) said authenticating authenticates the received authentication information of the current user based on the first authentication information, or (ii) said judging judges that one or both of the obtained time difference and the obtained place difference is not greater than or equal to the corresponding predetermined value.

Claim 49 (Previously Presented) A program stored on a computer-readable storage medium for using a portable recording apparatus, for connecting to a terminal apparatus, and for detecting times and places of connections, the portable recording apparatus including a storage unit configured for prestoring first authentication information relating to and given by an original user and having a first user area corresponding to the first authentication information and including a tamper-resistant authentication unit, said program causing a computer to execute a method comprising:

detecting a connection of the portable recording apparatus to the terminal apparatus;

obtaining (i) a time difference, which is a difference between a time at which the connection was detected and a prestored time at which a prior connection was detected, the time at which the connection was detected being obtained from the terminal apparatus, and the prestored time at which the prior connection was detected being a time previously obtained, and (ii) a place difference, which is a difference between a place at which the connection was detected and a prestored place at which a prior connection was detected, the place at which the connection was detected being obtained from the terminal apparatus, and the prestored place at which the prior connection was detected being a place previously obtained;

judging whether or not one or both of the obtained time difference and the obtained place difference is greater than or equal to a corresponding predetermined value;

requesting and receiving authentication information from a current user if said judging judges that one or both of the obtained time difference and the obtained place difference is greater than or equal to the corresponding predetermined value;

authenticating the received authentication information of the current user based on the prestored first authentication information; and

permitting use of the first user area to the current user if (i) said authenticating authenticates the received authentication information of the current user based on the first authentication information, or (ii) said judging judges that one or both of the obtained time difference and the obtained place difference is not greater than or equal to the corresponding predetermined value.

Claim 50 (Previously Presented) The portable recording apparatus of claim 26, wherein:

said judgment unit is configured for judging whether the time difference is greater than or equal to a first predetermined value, and judging whether the place difference is greater than or equal to a second predetermined value; and

when said judgment unit determines that the time difference is not greater than or equal to the first predetermined value and determines that the place difference is not greater than or equal to the second predetermined value, said reception unit requests the authentication information from the current user.